REMARKS

Claim Objections

Claim 22 is objected to for a lack of antecedent basis for the limitation "the plane." The present amendments to claims 12 and 22 correct this error. Favorable reconsideration is respectfully requested.

Claim Rejections – 35 U.S.C. 102

Claims 12 and 15-21 have been rejected under 35 U.S.C. §102(e) as anticipated by Tan et al., (U.S. Patent No. 6,680,705). The rejection is respectfully traversed for at least the same reasons presented in the previously filed response, and for the following reasons.

As currently claimed, the "plurality of parasitic transmitters" must be "in the plane defined by the planar patch antenna." The radiating element 201 of Tan is three dimensional. Accordingly, Tan does not teach this element.

In addition, Tan discloses a PIFA multi-band antenna having a ground element, a main radiating element and a capacitive feed element connect to an antenna feed. Additional second elements are provided such that the bandwidth or number or resonant frequencies of the antenna can be increased without increasing the overall dimensions of the antenna. With reference to Fig. 8 of Tan, the Examiner states that secondary elements 601, 801 are equivalent to the claimed parasitic transmitters, which are located marginal to the planar patch antenna and embodied so as to be free of high-frequency interface. Moreover, the Examiner states that Tan discloses a "line-type conductor" since it "is not well known in the art" and therefore interpreted "as a conductor long in proportion to its breadth." Applicants respectfully disagree.

1. Located Marginal to and Outside of the Planar Patch Antenna

The phrase "located marginal to and outside of the planar patch antenna" refers to the parasitic transmitters arranged closely adjacent to the planar patch antenna, as illustrated in Figs. 1-4 of the instant invention and the first full paragraph on page 3 of the original specification. In Tan, on the other hand, the secondary elements (parasitic transmitters) 601, 801 are not located marginal (i.e. adjacent) to the planar patch antenna, but rather located on the planar patch antenna (i.e. within the boundaries of the antenna), and in fact located within a gap between the main radiating element (Fig 8). Moreover, the secondary elements in Tan are not outside of the planar patch antenna, but rather located within the borders/edges of it.

The Examiner states that the phrase "located marginal to the planar patch antenna" requires that the planar patch antenna be located "close to" the parasitic transmitter, which the Examiner states is taught by Tan in Fig. 8, where the two elements are adjacent to one another. (See, paragraph 8 on page 4 of the Office Action). Applicants, however, disagree with the Examiner's definition of "marginal." Rather, marginal refers to something located on the border or edge or adjacent geographically, not "close to." To clarify this point, claim 12 has been amended to add that the transmitter is located marginal and outside of the planar patch antenna. As seen, for example, in Fig. 1 of the instant invention, the transmitters 2.1 and 2.2 are located marginal to (on the border or edge of the antenna), but also spaced apart (not touched the border or edge) from the antenna.

2. Parasitic Transmitters are Line-Type Conductors

The Examiner states that providing a patent which discloses a Microstrip Line Type Planar Array Antenna does not make the term "line-type" well known in the art. (See, paragraph 10 on page 5 of the Office Action). However, Applicants provide this patent as an example of what is known in the art, not as the only statement of a line-type antenna Moreover, there is no requirement that the "method of forming the conductor" be recited in the claims. Rather, the term "line-type" conductor itself is claimed. Again, the line-type conductor is evidenced in the Figures, for example, as elements 2.1 and 2.2 (which appear illustratively as lines).

Tan, on the other hand, fails to disclose parasitic transmitters that are arranged as line-type conductor structures, as required by the claimed invention. Rather, the secondary element is formed, for example, by cutting away from a corner of a rectangular plate during the tuning process (col. 4, lns. 54-56).

Claim Rejections – 35 U.S.C. §103

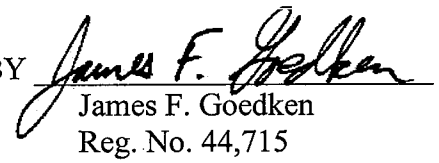
Claims 13, 14 and 22 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Tan, in view of Pederson, Gert Frolund (EP 1067627). The rejection is respectfully traversed. Claims 13, 14 and 22 depend from independent claim 12, and the combination fails for at least the same reasons presented in the arguments above.

In view of the above, Applicants submit that this application is in condition for allowance. An indication of the same is solicited. The Commissioner is hereby authorized to

charge deposit account 02-1818 for any fees which are due and owing, referencing Attorney Docket No. 119065-035.

Respectfully submitted,

K&L GATES LLP

BY 

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